



A FUTURISTIC VIEW FOR THE EFFECTS OF ARTIFICIAL INTELLIGENCE ON ACCOUNTING

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Abstract: Artificial Intelligence (AI) is the terminology of a technology that makes machines intelligent. It is a system designed by a human to make machines work intelligently. The purpose of artificial intelligence is to discover ways to perform complex human activities and show how computer technologies can work strategically as humans would. Artificial intelligence is rapidly changing the reality of accounting as it improves and reshapes the way real-world activities are conducted in the field. Accounting has changed significantly over the years, replacing paper and pencil work with computers first, but more importantly, reducing the time spent on repetitive tasks and reducing the number of errors. It has been replaced with a program that was done manually. In the short to medium term, AI brings many opportunities for accountants to improve their efficiency, provide more insight and deliver more value to businesses. In the longer term, AI raises opportunities for much more radical change, as systems increasingly take over decision making tasks currently done by humans. This white paper focuses on understanding the impact of artificial intelligence solutions in accounting as well as understanding the opportunities and challenges brought by AI in the field of accounting.

Keywords: Artificial Intelligence, Accounting, Accounting Process, Technology, Digitalization.

I. INTRODUCTION

The use of the traditional system is declined greatly and with a modernization of the accounting and finance process there has been a great deal of change, and these improvements are beneficial to the accounting and finance industry. Adopting Artificial Intelligence applications such as Expert systems for audit and tax, Intelligent Agents for customer service, Machine Learning for decision making, etc. can lead a great benefit by reducing errors and increasing the efficiency of the accounting and finance processes

Artificial intelligence is one of the most important technologies in future. Artificial technology is the ability of the machine to take decisions like a human does. The purpose of introducing this technology in accounting is to ensure speedy performance and accurate results with prime objective of saving time. With the advancement of research in *artificial intelligence* developing knowledge based intelligence system great changes have been developed in knowledge management, making it an essential element of decision making.

The dramatic demand and application of AI has led to significant improvements, especially in accounting, transforming paper-based accounting entries into software and computer accounting. Artificial intelligence has a long history associated with the accounting profession.

Adopting AI tools in the field of accounting and finance will enable in task automation and improving analytical capabilities in comparison to human as well as previously used obsolete technologies. The world is evolving around technology very fast and so is in the field of accounting too. These technologies such as artificial intelligence, block chain technology, chatbots, cloud computing etc. are the future of the world.

II. MOTIVE OF THE STUDY

To study the impact of artificial intelligence in accounting and the opportunities and challenges brought in the field of accounting.

III. REVIEW OF LITERATURE

- **Rodney F. Vaz (2021)**, revealed in his research that with the amount of resources available with the AI the daily task of accounting professionals has become easy and empowers them to focus on other vital research work as the technology is time saving.
- **Cindy Greenman (2017)**, concluded that automated technology is replacing manual tasks like book-keeping that are routinely performed by accountants.
- **Cara Jaslove (2017)**, analysed that the application of artificial intelligence in data analysis, book-keeping, tax accountant work, etc. has made accounting work easier.

In conclusion, artificial intelligence will benefit the accounting sector because it will allow certified public accountants to refocus their attention away from tedious activities and toward more analytical and data-driven judgments.

- **Amelia A. Baldwin et al. (2006)**, reviewed over the types of issues that arise in accounting and auditing and the necessity to use artificial intelligence (AI) technologies in the field. The talk centred on contemporary accounting difficulties, particularly in auditing and assurance, for which new AI development should be beneficial.

IV. RESEARCH METHODOLOGY

- **Type of research:** Descriptive Research has been chosen for developing better insight on the aforesaid topic.
- **Sources of data used:** Secondary data has been used which is extracted from various websites, journals, research articles, publications, accounting websites directly or indirectly related to artificial intelligence and accounting.

V. RESULTS

The research quality is assessed based on the validity, scope, and completeness of the research. The present research has been conducted in two parts, one is the impact of artificial intelligence's impact on future of accounting and the other one is opportunities and challenges brought in by AI in accounting. Going through the extensive literature review of various journals and publications it can be said that accounting is no more a traditional job to carry out with the advent of technology coming in lead role. Like in other industry AI plays vital role in the field of accounting too. The global development of technologies for the implementation of various activities is one of the ways to improve existing mechanisms. The Internet has become the key source of delivering information in the field of communication and information transmission. Artificial Intelligence (AI) is the emergence of a technology that automatically processes input actions efficiently and. It is a revolutionary technology to improve the productivity of any profession.



AI increases productivity and assist in expanding human potential

Professionals and clients can achieve their target timely once they reach their potential and that is possible only when these talented minds get freedom to operate and not putting them into monotonous task affecting their productivity. Aligning the regular task with automation through AI, accountants can use their creative mind and devote their intellectual resources to more sensitive areas. This will help them to work more closely with their clients and delivering the customized solutions as per need of the corporates.

Robotic Process Automation: It can be described as the monotonous document analysis of the task efficiently and effectively and even quickly than human does. With the introduction of AI humans can be put

to some other task and repetitive documentation work can be left with machines. This was also assist developed countries who have low birth rates and fall short of accounting staff.

Deriving actionable insights for analysis: Usually analysis in accounting demands intelligence quotient in humans but with the advancement of technology and continuous improvement machines will provide better insights in the analysis of financial data. It can quickly beat what human analysts presently do.

Radical Thinking: Human experts can make better decisions and provide better advice after getting better insights on data from AI. Indeed, evidence suggests that humans and computers working together in areas as diverse as chess and medicine produce better results than human or computers in isolation.

Solving accounting problems: Accountants are using technology from many years to provide themselves with better decision making. This advancement in technology can help accountants in solving problems such as generating new insights of data for analysis part as well as it can also be useful in utilising the idle time left after machine in focusing on more vulnerable tasks such as strategic planning, decision making, advisory and leadership.

Opportunities and Challenges of Artificial Intelligence

There has always been a love-hate relationship with new technology. No doubt advancements are very much exciting but there are worries of what is getting left behind on adopting new technology. In this section we will focus on opportunities and challenges brought in by artificial intelligence in the field of accounting.

OPPORTUNITIES

- **AI reduces monotonous responsibilities:** For an accounting firm one of the most important objective is to improve the efficiency of the workflow which is not possible in traditional manner as people become lethargic due to monotonous assignment. With the machine learning capabilities AI automatically with its experience makes it possible to input data as a task of book-keeping. Automatic importing of bank transactions, auto reminder of recurring payment invoices can reduce monotonous responsibilities of people engaged in accounting work.
- **Time saving:** AI helps companies in obtaining and consolidating data from various numerous sources which saves time and help them to plan their work efficiently and focus effectively on their goals. Smart features of artificial intelligence can streamline the process of reconciling as well as categorizing accounts.
- **Procurement:** The ones' who are engaged in the task of procurement knows better how much paper work involvement is there and that give rise to lots of complications. An integrated AI software will help in structuring of data and making it paperless.
- **Chatbots:** A conventional AI chatbot or chatterbot can easily engage with people on a level that feels personal and even empathetic-like talking to a helpful assistant. This is particularly used in answering customer's inquiries. It is useful where customers often asks same types of questions including certain bills are due, account balance etc.
- **Transparency:** AI brings transparency in the business process that too particularly in financial disclosures.

- Handful tool for auditing: AI's role becomes vital in auditing work as it helps in searching and accessing digital files within short span of time making the audit work more precise as firm's business transactions can be checked easily. During an audit, auditors need not to search file cabinets for documents as they can be easily accessed digitally.

CHALLENGES

- Data security: Accounting uses lots of data and depending upon the purpose the earlier is used in AI software. There is huge possibility of infringement of sensitive and confidential data. It's a great concern for companies to introduce data protection.
- Inadequate change management: Introducing technology demands change. Some organisations are reluctant to change their accounting system from traditional to cloud based accounting. Once they move towards implementation of AI in accounting they need effective change management in the organisation and their system.
- Distrust of AI: In the wake of increasing productivity the algorithms designed to achieve optimal efficiencies can turn into negative result or unforeseen consequences. It usually rises when trials are made for solving the things cause great harm than good.
- Balancing AI with human intelligence: Surely AI can be a superb tool, but it cannot replace all real human tasks. There are things which human understands better than machines such as clients' needs and future plan crafting personalized financial analysis to help them to get there.
- Organisational support for rich technology: A very few organisations have put money in the deployment of AI based goods. There aren't enough people who can use technology, think independently, and learn. A very less people can make help and understand other companies the success of the machines.
- Ambiguity in the output: Any input can be administered through a process that clashes between organisations or individuals and requires human brain activity. Therefore, creating AIs that can withstand such circumstances and produce results that are accepted by all is still a challenge. There could be some inaccurate data that produces a dishonest and unfair outcome. Due to the possibility of an unfair judgement, these findings can be disregarded.
- Insecurity of job loss: It has been long argued that advances in AI-based programming may in the future eliminate the use of humans in the field of accounting as day to day operations and their record-keeping become automated. With the accuracy and speedily feature of performing task by computers there is always an insecurity among human in losing their jobs and that will also eliminate the human aspect in accounting.

VI. CONCLUSION

The accounting industry needs to understand that introduction of technology would not replace humans by replacing them but it aids to improve tasks performed by them. The monotonous tasks can be done easily and accurately providing time saving and cost benefit to the organisation. Additionally, it will enable accounting experts to conduct necessary research on various topics. Although machines can do better analysis but this analysis is of no use without the interpretation of humans. Creativity and critical thinking cannot be replaced by artificial intelligence such as chatbots. No matter how many opportunities does AI brings there are some

threats too such as fearlessness of jobs among humans. There is always question on the security of the data in case of any disruption in technology the data stored may get exhausted and the economy get collapsed too.

VII. REFERENCES

- Greenman Cindy (2017), Exploring the impact of Artificial Intelligence on the Accounting Profession, *Journal of Research in Business Economics and Management* 8(3), 1451.
- Jaslove Cara (2017), *The rise of Artificial Intelligence: An Analysis on the future of Accountancy.*
- Griffin Oliver (2019), *How artificial intelligence will impact accounting, Economica.*
- Baldwin A. Amelia, Brown E. Carol & Trinkle S. Brad (2006), Opportunities for artificial intelligence development in the accounting domain: the case for auditing, *Intelligent Systems in Accounting, Finance and Management*, John Wiley & Sons, Ltd., vol. 14(3), pages 77-86.
- Vaz F. Rodney (2021), The impact and challenges of artificial intelligence in the future of finance and accounting, *International Journal of Advanced Research in Commerce, Management & Social Science (IJARCMSS)*, Volume 04, No. 01, pp 180-184
- Jariwala Bhumi (2015), *Exploring Artificial Intelligence & the Accountancy Profession: Opportunity, Threat, Both, Neither?*, International Federation of Accountant.
- <https://www.haptik.ai/knowledge-center/ecommerce-chatbot-drive-sales-and-retention#:~:text=An%20eCommerce%20chatbot%20is%20an,every%20stage%20of%20their%20journey.>
- <https://www.ifac.org/knowledge-gateway/developing-accountancy-profession/discussion/exploring-artificial-intelligence-accountancy-profession-opportunity-threat-both-neither>
- <https://www.enterpriseedges.com/importance-artificial-intelligence>
- <https://www.patriotsoftware.com/blog/accounting/artificial-intelligence-aiaccounting/>
- Gupta, A., & Panday, K. K. *AUTOMATION IN ACCOUNTING AND FINANCIAL REPORTING PROCESS: A STUDY ON DIGITAL LENDING.*